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COMMISSION OF CONSERVATION, CANADA
Committee on Public Health

REFUSE COLLECTION AND DISPOSAL

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Fig. 1.—A Contrast in Civic Efficiency: Two Examples of Back Premises





*To the
men, women,
and children of
Canada, who live clean
lives, love clean homes, take a
pride in their city, and an inter-
est in their country's welfare
this little pamphlet in the
interest of public health
is respectfully dedi-
cated by the
author.*

Refuse Collection and Disposal



An important problem of municipal health is the removal and efficient disposal of house refuse with expedition, regularity and at a minimum cost to the ratepayer.

There are two kinds of house refuse, liquid and solid.

The former is called sewage, and in all up-to-date towns is collected in sewers and discharged in such a manner as not to create a nuisance. In some instances, municipalities in Canada have had to abate nuisances caused by sewage by installing and operating disposal plants. In the case of liquid refuse, the work of collection and disposal is done by the municipality at the minimum cost and to the great convenience of the householder. Who would suggest a departure from this sanitary method? What town councillor or alderman would suggest reverting to the primitive system of individual disposal?

What shall be said then as to the collection and disposal of all the solid refuse of the modern home? With but few exceptions, the problem has not been properly met nor efficiently dealt with, yet all must admit that, for the sake of health and the improvement of slum and urban sanitary conditions generally, we have yet a long way to go before it can be said that this work of bettering home environment is efficiently done in Canada.

A striking contrast in cleanliness is exhibited in Fig. 1. The upper illustration is a Canadian scene showing how the civic authorities deposit refuse in close proximity to a number of good residences. The 'dump' is not supervised in any way, and is as disorderly and filthy as one would expect to find in the centre of a savage town in mid-Africa, instead of in Christian Canada. The lower picture illustrates the good effects of civic efficiency. It is a view of the back premises of homes where refuse is kept in proper receptacles and regularly removed by the town scavengers to the destructor. - There is no reason why every Canadian town and city should not be kept as tidy and as healthy.

The city dweller has not far to go from home to find evidences of garbage accumulation which are a discredit to himself as well as to the municipal authorities. Fig. 2 is an example of how house refuse will accumulate on the premises of the working classes even in a city with some pretence to a system of refuse collection, while Fig. 3 illustrates how the failure to efficiently operate what is intended for a good system is attended with even more untidy and insanitary conditions than exist where the work is left to the individual householder. Fig. 3 is an evidence that, in this particular city, the collection system was not operating as well as it should, and yet the same city was urging



Fig. 2.—Garbage in a Back-yard in a large City of Ontario with a so-called System of Refuse Collection

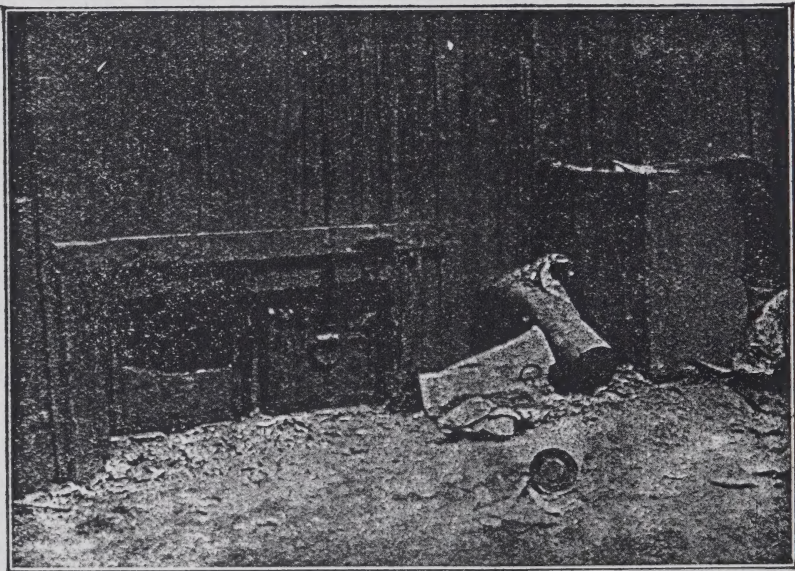


Fig. 3 -Rear View of a Private Residence in a Canadian City: A Reflection on the Health Department

its citizens to 'swat the fly'—little use with so much decomposing refuse lying around in open barrels forming good breeding grounds for that pestiferous insect. The next illustration, Fig. 4 is another good example of what occurs where the collection of refuse is not systematically carried out by the authorities. The garbage cans themselves become a nuisance—two of the lids are gone and the containers are full to overflowing.

As exhibiting the effects of a failure to have any civic system of refuse collection and imposing the work on the individual householders, Figs. 5 and 6 indicate the manner in which lanes become littered in two of our smaller cities.

Having illustrated a few of the features incident to the neglect and inefficiency of the health department, and the carelessness and indifference of the householder, attention may be directed to the unsatisfactory, because in-



Fig. 4.—In a Back Lane of a City with a System of Refuse Collection Improperly Managed

sanitary, manner in which health authorities permit a department of the civic government to dispose (?) of what is collected, by depositing refuse of all kinds at the "town dump." Fig. 7 is a small section of the dump of a city of some 40,000 inhabitants. Here may be found bits of paper, mattresses, old cans, iron bedsteads, wire springs, glass, pots and pans, manure and decomposing vegetable matter—all indeed that goes to offend the eye and common decency. Nothing is burned and no effort is made to deposit the refuse in an orderly manner or cover it up—all this within the city limits and in close proximity to a large public institution. The land around is littered with paper and light material carried by every wind that blows. The municipality should be indicted for maintaining a common nuisance detrimental to health. The next illustration (Fig. 8), is a horrid example of a city dump, a portion of which has been used for an emergency hospital. No attempt has even been made to put a top dressing of lime and clean earth over the gigantic rubbish pile. It is a pity

the civic aldermen and officials were not compelled to occupy these tents and spend their summer vacation at this health resort (?) and suffer something of what they condemned the city's sick to endure for weeks at a time. It is more than probable there were more rats than nurses and patients. Certainly the mayor, the medical health officer, or members of the local board of Health were not amongst the patients sentenced to this Gehenna.

The responsibility for the keeping of one's premises in a sanitary condition, that is, clean and free from an accumulation of domestic waste, is placed upon the head of each household. In rural districts and small towns and villages where there is plenty of ground, it is possible to burn up most of the refuse and bury the indestructible portion in the ground. The city dweller, being cramped



Fig. 5.—Littered Lane in the Central Portion of a small Canadian City

for space, cannot dispose of the waste in this manner. He has to allow it to accumulate either in barrels or boxes, sometimes in covered bins. When the municipal authorities fail to provide the ways and means for its regular and systematic removal he must remove it at his own cost and often at considerable inconvenience, for it is not an easy matter to find a person ready and willing to act as scavenger. Even if one can be found to do the work, the difficulty is to find a suitable place for depositing the rubbish without running the risk of creating a nuisance.

At the present time we hear much of the "clean-up week." This is nothing more than a public avowal by the health authorities that they have no system of refuse collection and disposal. In other words, the authorities simply allow

their municipality to be kept in an untidy and insanitary condition for 52 weeks, and then make a grand display of civic incapacity by trying to get rid of a large amount of decomposing and other refuse at one fell swoop. Then with a loud "Hurrah" they proclaim the city clean. There is no necessity for this enlisting of school children, boy scouts and girl guides in spasmodic efforts at attempting to keep the town clean. We should not follow the deplorable example set us by the large American cities. Rather we should teach the boys and girls that keeping the home premises clean and free from refuse day by day is just as necessary as cleaning their teeth daily. What is wanted in Canadian towns and cities is *system* in the matter of refuse collection and disposal, and



Fig. 6.—Lane in the Centre of a Canadian City at Midday: Uncollected Refuse

each child should be taught that it is better and easier to keep the premises clean than it is to clean up premises that are allowed to become defiled with rubbish of any kind.

It should be the duty of each ratepayer to insist upon it that the work be instituted under civic control, not only as a matter of economy and civic pride, but, what is of infinitely more importance, for the health and comfort of all. Men, women and children may "swat the fly" as hard and as often as they like, but should devote a little of that same energy to 'swatting' the councillors until they bestir themselves and inaugurate a system of refuse collection. More will be done in this way to rid our homes and our cities of flies than ever was thought possible.

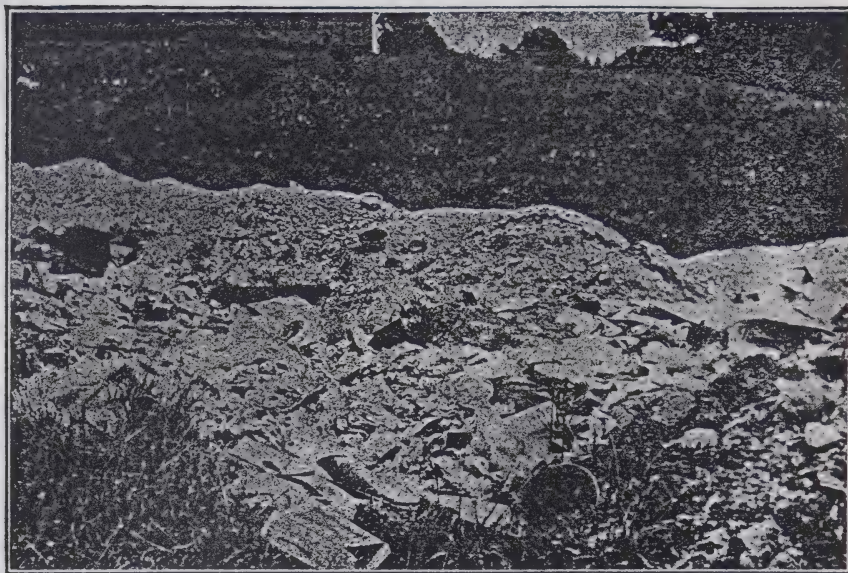


Fig. 7.—A Typical and Disgraceful City Dump: No Attempt on Part of Municipality to Burn Refuse or Cover up the Fermenting Mass



Fig. 8.—A Capital City using Site of Town Dump for Temporary Smallpox Hospital: Note the Accumulated Refuse.

One very important point in refuse destruction is overlooked. It is the possibility of burning a certain amount in the kitchen stove. Quite a percentage of the refuse thrown into the yard or lane and then carried by the wind to the uttermost parts of the city could be burned in the furnace or stove. Examine a "dump" or watch a scavenger's waggon and see how much it contains of material of this kind. Then ask yourself, 'How much do I burn at home?' Remember, too, that each pound you burn at home lessens the amount to be removed from your premises, and reduces the cost of removal.

It is as essential that the civic authorities should make proper provision for the collection of solid waste as they do of liquid waste (sewage). If each householder had to barrel the liquid waste and be responsible for its careful

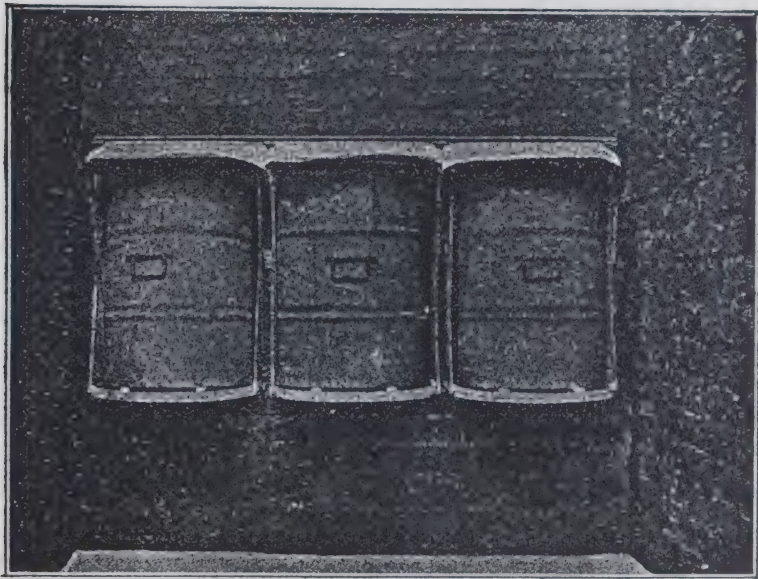


Fig. 9.—A Well regulated System in Operation: Note Elevation above Rain Splash, Children and Animals : Can be Operated in Winter

disposal, what a mess there would be! And it would reach its worst in the homes of the poor. It is bad enough now when there is inadequate water-closet accommodation. Then why, in the interest of the health, happiness, and morals of the masses, should we not have in all our cities a civic system, lessening the evils of slumdom and tenement dwellings. We should make each day a 'clean-up' day, so far as refuse is concerned.

The Civic System should include the following points—

- (1) The selection of a suitable container—one for ashes and old cans, etc., the other for household waste.

- (2) The regular and systematic collection of the same.
- (3) The disposal of the waste either at a suitable supervised dump or, preferably, at a destructor.

Fig. 9 shows a container properly placed on the premises so as to be above the reach of cats and dogs and yet permitting the full use of the can in winter time.

The authorities must make provision for the collection, not only of the cans and ashes but for the removal of other material, such as beds and articles too bulky for the containers. Where a "dump" is operated, it should be placed in charge of an official, and as much of the paper and combustible material as possible burned. Care should be taken to carefully cover the dump with a layer

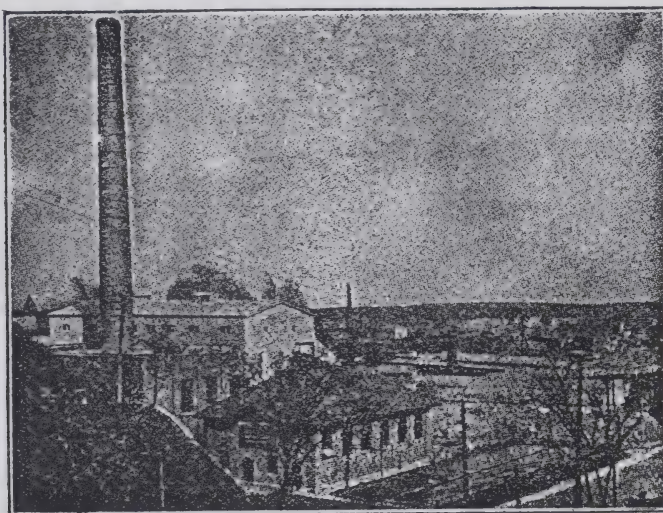


Fig. 10.—Garbage Destructor at Westmount, Que. Power House and Cooling Pond in Foreground; Boiler and Incinerator Room in Rear

of lime and clean earth so that its objectionable features may be reduced to a minimum.

The installation of a civic destructor is advisable where finances will permit, and a type such as that in successful operation in Westmount, Que., for some ten years, is strongly recommended. This plant is of the English type, a high temperature, forced-draught type which has stood the test of experience. The clinker from these destructors makes a good foundation for roads or walks, and, as in the case of Westmount, an electric power plant, operated by the heat evolved, may be instituted as part of the system. Fig. 10 shows the Westmount destructor.

Speaking in general terms of the English destructors, the efficient as well as the economic working of them depends largely upon intelligent and con-

stant supervision. The maintenance of high temperatures is to be obtained only by continuous feeding. In addition to the regular and proper feeding of the cells, it is necessary for the prevention of nuisances that the fires be stoked regularly and systematically, and that the blast be cut off each time during the clinkering process.

Given a good destructor and proper management, civic waste and house refuse is reduced to about one-third its original bulk, the residue being innocuous clinker, metallic refuse, and dust.

HINTS TO HOUSEHOLDERS

The following hints to householders, issued by the Health Department of the city of Winnipeg, are so practical and good that they should be followed out in every city in Canada:

"With the approach of winter, a few hints as to the keeping of refuse during the cold weather will not be out of place.

"If householders will carry out the following suggestions and adhere to the regulations issued by the Health Department, they will assist the scavenger in his duties and will save themselves much annoyance and expense.

"Average householders are more or less careless about the way in which the refuse is kept during the winter, and immediately the warm weather begins to appear, they awaken to the fact that they are loaded up with all kinds of rubbish, and they usually end up by complaining that the scavenging department is not giving the attention to its work that it should do.

"This department finds that no less than 90 per cent. of the complaints received are unjustified, being due either to the neglect or sufferance of the occupier or owner of the premises in not complying with the regulations of the department

"During the cold weather, particular attention should be paid to the kitchen refuse. This class of refuse usually contains more or less moisture, with the result that, when placed in the garbage can, it freezes solid and has to be removed by an iron bar, much to the detriment of the can. If householders would wrap their kitchen refuse in paper before placing it in the garbage can, their receptacles would last ten times as long, the scavenger would save a lot of time, as the contents would be easily emptied, and the can would always be sweet and clean.

"Do not place anything in the garbage can but kitchen refuse and always drain all the water from it before doing so.

"Do not keep your can or any other receptacle inside the building; the scavengers are strictly forbidden to go inside for receptacles. If there is a lane at the rear of your premises, place your can near it, and not just outside the kitchen door. By doing this, you will save the scavengers many miles of walking in a day, and you will consequently get a more frequent and better service.

* "Secure your can from being turned over by dogs by driving a stick through one handle firmly into the ground.

"Pass a chain or wire through the handle of the lid, secure it to the fence by a staple and you will never lose it.

"Ashes must be stored in fireproof receptacles if you want them removed during the winter months, and the receptacles must be of such a size as not to hold less than 27 cubic feet. If you do not want ashes removed until the spring, they may be placed on the ground, but they must be so placed as to be convenient for loading into waggons.

"Ashes are not removed by this department from places of business, from blocks containing offices or stores, or from public or private institutions.

"Incombustible refuse must be placed in covered boxes so as to exclude snow and they should be placed at the rear end of the lot when there is a lane. Do not keep your empty tins and bottles in the basement or woodshed during the winter and then expect this department to remove an accumulation of six months in a few days in the spring.

"Burn as much paper, rags, straw, etc., as possible, and so keep the city's streets and lanes clean. If this is impossible, tie it up in bundles and place it in a covered box near the garbage can.

* * * * *

"Owing to the fact that this department is so seriously handicapped in spring in removing the winter's accumulation of refuse, and, as this accumulation could easily be prevented if each householder would do his little mite and keep all refuse in order and not hoard it up inside during the winter months, it is earnestly requested that every citizen of Winnipeg will do his share by carrying out these rules and suggestions, and so make the work of the department easier and more efficient than it has ever been before."

Men, women and children of Canada, let your watchword and your work be for clean homes. Individual responsibilities properly discharged will produce a great uplift in home life throughout our Dominion. Lend your aid. Then we shall have clean cities, towns and villages, with health for all.

